

FRIDMAN, S.Ye.

BN-100 attachment to tractor for covering beet piles. Sakh.prom.  
35 no.4:51-52 Ap '61. (MIRA 14:3)

1. "Rosglavpishchesbytsyr'ye" pri Vserossiyskom sovete narodnogo  
khozyaystva.  
(Sugar beets)

FRIDMAN, S.Ye.

Dirt percent of sugar beets. Sakh.prom. 35 no.4:58-60 Ap '61.

1. "Rosglawpishchesbytsyr'ye" pri Vserossiyskom sovete narodnogo  
khozyaystva.

(Sugar beets)

FRIDMAN, S.Ye.

Experience showing the future of our sugar-beet production. Sakh.  
prom. 35 no. 5:37-38 My '61. (MIRA 14:5)  
(Sugar beets)

FRIDMAN, S.Ye.

Information. Sakh.prom. 36 no.5:79 My '62.  
(Sugar industry)

(MIRA 15:5)

FRIDMAN, S.Ye.

Experience in the use of trench cutters for the opening and removal of the soil cover of sugar beet piles. Sakh.prom. 36 no.9: 36-37 S '62. (MIRA 16:11)

1. Glavnaya upravleniya po snadzheniyu i sbyru pishchevogo syr'ya pri Vserossiyskom sovete narodnogo khozyaystva.

VOSTOKOV, A.I.; DEMCHINSKIY, F.A.; YEPISHIN, A.S.; KATS, V.M.;  
KLEYMAN, B.M.; LEPESHKIN, I.P.; LIEKIND, L.I. [deceased];  
MEL'NIK, M.K.; POPOV, N.G.; STUDENETSKIY, V.A.;  
FRIDMAN, S.Ya.; SHAPIRO, A.I.; SILIN, P.M., prof.,  
retsenzent; VINOGRADOV, N.V., prof., retsenzent;  
PRITYKINA, L.A., red.

[Manual for a sugar worker] Spravochnik sakharnika. Mo-  
skva, Pishchepromizdat. Pt.1. 1963. 699 p.  
(MIRA 17:5)

FRIDMAN, S.Ye.

Notes on raw materials. Sakh.prom. 37 no.7:51-55 Jl '63.  
(MIRA 16:7)

1. Rospishchesbytsyr'ye pri Sovete narodnogo khozyaystva RSFSR.  
(Sugar beets)

BASMANOV, P.I.; FRIDMAN, T.I.; PETRYANOV, I.V.

New method of purifying and sterilizing the air in the process of  
fermentation in the production of antibiotics. Med.prom. 13 no.11:  
31-35 N '59. (MIRA 13:3)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni  
L.Ya. Karpova i Vsesoyuznyy nauchno-issledovatel'skiy institut anti-  
biotikov.  
(AIR--PURIFICATION) (ANTIBIOTICS)

BOYKO, I.D.; ZHUKOVSKAYA, S.A.; FRIDMAN, T.I.

Construction of a cylindrical vacuum filter for hard-to-filter  
cultural fluids of antibiotics. Med.prom. 14 no.3:32-38 Mr '60.  
(MIRA 13:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.  
(FILTERS AND FILTRATION)

FRIDMAN, V., kandidat tekhnicheskikh nauk

Problem of preparing water for locomotives. Zhel.dor.transp. no.8:  
32-38 Ag'47. (MLRA 8:12)  
(Locomotives) (Feed-water purification)

FRIDMAN, V. B. and CHEKMAREVA, P. P.

"Annealing Threaded Ends of Automobile Parts by Means of High Frequency Currents," Avt. trakt. prom., No.1, 1952

*FRIDMAN, V.G.*

KARPOV, Vladimir Timofeyevich; FRIDMAN, V.G., red.; SOROKINA, T.I.,  
tekhn.red.

[Bratsk Hydroelectric Power Station] Bratskaya GES. [Irkutsk]  
Irkutskoe knizhnoe izd-vo, 1957. 32 p. (MIRA 11:4)  
(Bratsk Hydroelectric Power Station)

GAVRILOV, Mikhail Konstantinovich; SMIRNOV, Aleksey Andreyevich; STEPICHEV,  
Ivan Stepanovich; FRIDMAN, V.G., red.; SOROKINA, T.I., tekhn.red.

[Agriculture in Irkutsk Province during the past 40 years]  
Sel'skoe khozaiestvo Irkutskoi oblasti za 40 let. [Irkutsk]  
Irkutskoe knizhnoe izd-vo, 1957. 120 p. (MIRA 11:4)  
(Irkutsk Province--Agriculture)

SILINSKIY, P.P., otv.red.; BURTSEV, Ye.G., red.; GAVRILOV, M.K., red.;  
MALYSHEV, R.P., red.; CHUYKO, K.V., red.; SHOTSKIY, V.P., red.;  
FRIEDMAN, V.G., red.; SOROKINA, T.I., tekhn.red.

[Irkutsk Province; a concise manual of its economy and statistics]  
Irkutskaya oblast'; kratkii ekonom-statisticheskii sbornik.  
Irkutskoe knishnnoe izd-vo, 1958. 165 p. (MIRA 12:4)

1. Akademiya nauk SSSR. Vostochno-Sibirskiy filial, Irkutsk.  
(Irkutsk Province--Statistics)

SILLINSKIY, Pavel Pavlovich; FRIDMAN, V.G., red.; PECHERSKAYA, T.I.,  
tekhn.red.

[Developing the economy of Irkutsk Province in 1959-1965; facts  
and figures] Razvitiye narodnogo khozisistva Irkutskoi oblasti  
v 1959-1965 godakh; tsifry i fakty. Irkutsk, Irkutskoe knizhnoe  
izd-vo, 1959. 57 p. (MIRA 13:9)  
(Irkutsk Province--Economic policy)

TAGAROV, Z.; FRIDMAN, V.G., red.; PECHERSKAYA, T.I., tekhn.red.

[Labor movement in the Cheremkhovo coal district] Rabochee  
dvizhenie v Cheremkhovskom ugol'nom raione; kratkii istori-  
cheskii ocherk. Irkutsk, Irkutskoe knizhnoe izd-vo, 1959.  
144 p. (Cheremkhovo--Coal miners) (MIRA 12:12)

KOSYKH, Aleksandr Polikarpovich; FRIDMAN, V.G., red.; KARAS', V.D.,  
tekhn.red.

[State farms in Irkutsk Province] Sovkhozy Irkutskoi oblasti.  
Irkutsk, Irkutskoe knizhnoe izd-vo, 1959. 147 p. (MIRA 12:9)  
(Irkutsk Province--State farms)

FRIDMAN, V.G.

Causes of the breakdown of expander fly-wheels. Kislord 12  
no. 5:42-43 '59. (MIRA 13:2)  
(Oxygen) (Fly-wheels)

KUNGUROV, Gavriil Filippovich; FRIDMAN, V.G., red.; PECHERSKAYA, T.I.,  
tekhn.red.

[Town on the Angara] Gorod na Angare. Izd.2. Irkutsk,  
Irkutskoe knishnoe izd-vo, 1960. 128 p.

(MIRA 14:2)

(Irkutsk)

SILINSKIY, Pavel Pavlovich; FRIDMAN, V.G., red.; PECHERSKAYA, T.I.,  
tekhn.red.

[Developing the economy of Irkutsk Province in 1959-1965; facts  
and figures] Razvitiye narodnogo khoziaistva Irkutskoi oblasti  
v 1959-1965 godakh; tsifry i fakty. Izd.2., ispr. i dop.  
Irkutsk, Irkutskoe knizhnoe izd-vo, 1960. 61 p. (MIRA 14:7)

(Irkutsk Province—Economic policy)

RANDO, Yevgeniy Georgiyevich; FRIEDMAN, V.O., red.; PECHERSKAYA, T.I.,  
tekhn.red.

[Everybody must know this] Eto dolzhen znat' kozhdyi. Irkutsk,  
Irkutskoe knizhnoe izd-vo, 1960. 111 p.

(MIRA 14:3)

(Irkutsk Province--Economic policy)

SILINSKIY, Pavel Pavlovich; FRIDMAN, V.G., red.; PECHERSKAYA, T.I.,  
tekhn. red.

[Developing the economy of Irkutsk Province in 1959-1965;  
facts and figures] Razvitiye narodnogo khoziaistva Irkutskoi  
oblasti v 1959-1965 godakh; tsifry i fakty. Izd.2., ispr. 1  
dop. Irkutsk, Irkutskoe knizhnoe izd-vo, 1960. 61 p.  
(MIRA '16:3)

(Irkutsk Province--Economic policy)

FRIEMAN, V.G., red.

[Heroic deeds are born in work; essays] Podvig rozhdaetsia  
v trude; ocherki. Irkutsk, Irkutskoe knizhnoe izd-vo,  
1961. 59 p. (MIRA 18:3)

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513720010-2

KARPOV, Vladimir Timofeyevich, kand. ekon. nauk; FRIEDMAN, V. S.,  
red.

[The Angara-Yenisey series] Angaro-Eniseiskii kaskad. Irkuts,  
Irkutskoe knizhnoe izd-vo, 1962. 58 p. (MIRA 18:3)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513720010-2"

SMIRNOV, Nikolay Nikolayevich; PUGACHEV, A.I., kand. tekhn. nauk,  
retsenzent; FRIDMAN, V.G., inzh., red.; GRIGORASH, K.I.,  
red.; NOVIK, A.Ya., tekhn. red.

[Operational engineering efficiency of airplane structures]  
Ekspluatatsionnaya tekhnologichnost' samoletnykh konstruktsii.  
Moskva, Oborongiz, 1963. 123 p. (MIRA 17:2)

FRIMAN, V.G., red.

[Bratsk Hydroelectric Power Station; a collection of documents and materials] Bratskaja GES; sbornik dokumentov i materialov. Irkutsk, Vostochno-Sibirskae knizhnoe izd-vo. Vol.1. 1964. 555 p. (MIRA 19:1)

FETIMAN, V.G.

Problem of multiple control. Trudy MINKHOF no. 52:52-64 '64.  
(KGB 18:6)

FRIDMAN, V.G.  
C A

3

Distribution of carbon isotopes. V. G. Fridman.  
Pis'ma 1960, No. 2, 65; Khim. Referat. Zhur. 1960, No.  
8, 2.—By means of a highly sensitive mass-spectrograph  
with a high resolution power E, investigated the value of  
the ratio  $^{13}\text{C} / ^{12}\text{C}$  for various materials: graphite, crude  
diamond, meteorites, limestones, plants, meat, etc.  
W. R. Henn

AM-10A METALLURGICAL LITERATURE CLASSIFICATION

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513720010-2

FRIDMAN, Vladimir Georgievich, 1881-

Mechanics in railroad transportation Moskva, Transzhelizdat, 1946. 194 p. (50-55946)

TF153.F7

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513720010-2"

~~FRIDMAN, V.~~, professor (Moskva).

~~Explaining the law of inertia. Fiz.v shkole 16 no.5:91 S-0 '56.~~  
~~(Force and energy--Study and teaching) (MILRA 9:11)~~

PRIDMAN, V.G.

Newton's principles of relativity. Trudy Inst.ist.est.i tekhn.  
17:425-449 '57. (MLRA 10:?)  
(Relativity (Physics))

FRIDMAN, V. G.

AUTHOR: Fridman, V. G., Engineer. 67-1-5/20

TITLE: The Production of a Neon - Helium - Nitrogen Compound  
(Poluchenije neonno-geliye - azotnoy smesi)

PERIODICAL: Kislorod, 1958, Nr 1, pp. 34-35 (USSR).

ABSTRACT: It is described in this paper that for the production of pure neon as raw material a neon-helium-nitrogen compound is used which forms under the cover of the condenser of an air fractionating apparatus with double rectification during operation. This compound is usually removed by a special valve at intervals in order to avoid an interruption of the operation of the apparatus. This compound contains 8 - 12% neon and helium and 90-92% nitrogen. In order to use this compound for the mentioned purpose an additional attachment - called dephlegmator - is connected to the air fractionating apparatus by means of which the total content of neon and helium in the compound can be increased to 50%. According to the scheme this additional attachment consists of: a valve dephlegmator, a level indicator of liquid nitrogen in the space between the valves, level indicator of liquid nitrogen in

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The Production of a Neon-Helium-Nitrogen Compound

67-1-5/20

the valves, outlet valve for the neon-helium-nitrogen compound into the gas tank, outlet valve for gaseous nitrogen, inlet valve for liquid nitrogen, outlet valve for the compound under the cover of the condenser of the air fractionating apparatus; outlet valve for liquid nitrogen; casing of the dephlegmator filled with insulating material. In order to simplify control and regulation of the function of the dephlegmator a special junction diagram is suggested in this work consists of the following parts: throttle valve at the inlet valve of liquid nitrogen to the dephlegmator, outlet valve for the neon-helium-nitrogen compound in the gas tank, dephlegmator, measuring diaphragms or gas meters.

There are 2 figures, and no references.

AVAILABLE: Library of Congress.

1. Industry--USSR
2. Neon-Production

Card 2/2

FRIDMAN, V.G.

Evaluation of the quality of symmetrical automatic control systems  
based on amplitude-phase characteristics. Trudy MINKH1GP  
no.34:173-182 '61. (MIRA 14:12)  
(Automatic control)

*FRIDMAN, V.G.*

AUTHOR FRIDMAN V.G. PA - 2901  
TITLE ON NEWTON'S THEORY OF MASS.  
(Ob uchenii N'yutona o masse.-: Russian)  
PERIODICAL Uspekhi Fiz. Nauk 1957, Vol 61, Nr 3, pp 451 - 460 (USSR).  
Received: 5/1957 Reviewed: 6/1957  
ABSTRACT Newton's real definition runs thus "Quantitas materiae est  
mensura eiusdem orta ex illius densitate et magnitudine comiunc-  
tim" i.e. "The quantity of matter is its measure which results  
from its density and its volume jointly. According to the  
author's opinion Newton did not define mass as a quantity of  
matter. With this definition, however, Newton did not give a  
precise law of mathematics ( $m = V.d.$ ), for he was obviously  
conscious of the difficulties occurring in the case of heter-  
ogeneous bodies.  
The Latin original text does not contain the conception "mass".  
Newton uses this conception later in the explanation of the  
aforementioned definition. According to the author's opinion  
Newton uses the conceptions "corpus" and "massa" only as  
synonyms of the conception "quantity of mass" ("quantitas  
materiae"). According to the author's opinion Newton's real de-  
finition of mass runs as follows: "The mass is a measure of  
matter which results from its density and its volume jointly."

CARD 1/2

L 16068-66 EWT(1)/EWP(e)/EWT(m)/ETC(f)/EPF(n)-2/EWG(m)/T/EWP(t) IJP(e)

ACC NR: AT6004494

JD/GS/AT/WH

SOURCE CODE: UR/0000/65/000/000/0223/0232

AUTHOR: Vurzel', F. B.; Dolgopolov, N. N.; Maksimov, A. I.; Polak, L. S.; Fridman, V. I.

ORG: none

TITLE: Application of high frequency electrodeless plasma generator to production of pure silicon and its oxides

SOURCE: AN SSSR. Institut neftekhimicheskogo sinteza. Kinetika i termodinamika khimicheskikh reaktsiy v nizkotemperaturnoy plazme (Kinetics and thermodynamics of chemical reactions in low-temperature plasma). Moscow, Izd-vo Nauka, 1965, 223-232

TOPIC TAGS: plasma generator, high energy plasma, plasma device, silicon, silicon dioxide, silicon carbide, plasma chemistry

ABSTRACT: The high frequency electrodeless plasma generator in chemical technology is superior to the electrode-type plasma generator since it eliminates the problem of contamination by the electrode material. The electrodeless plasma generator can handle the chemically aggressive as well as nonaggressive gases and it is particularly suitable for high temperature chemical processes. The typical conditions of opera-

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ACC NR: AT6004494

2

tion of a high frequency electrodeless plasma generator are: argon flow rate 36-51 l/min, oxygen flow rate 1.1-2.1 l/min, hydrogen flow rate 1.2-1.8 l/min, discharge input 3.4-5.2 kilowatts, portion of input carried away by the gases 1.9-2.4 kilowatts, and loss of the input energy 1.5-3.3 kilowatts. The unit utilizes a power supply IGD-32 operating within 15-30 megacycles. A detailed temperature distribution in argon plasma is given. It is indicated that the high frequency electrodeless plasma technique can be employed to decomposition of  $\text{SiO}_2$  into elemental silicon or silicon monooxide. Other important applications include the decomposition of  $\text{SiCl}_4$ , formation of silicon carbide from methylchlorosilane, oxidation of  $\text{SiCl}_4$  to silicon mono- or dioxide, and reduction of silicon dioxide. The temperature dependence of the concentration  $x$  of silicon and silicon monooxide in silicon-containing decomposition products is shown in fig. 1. Orig. art. has: 4 figures, 4 tables, 5 formulas.

Card 2/3

I 16068-66

ACC NR: AT6004494

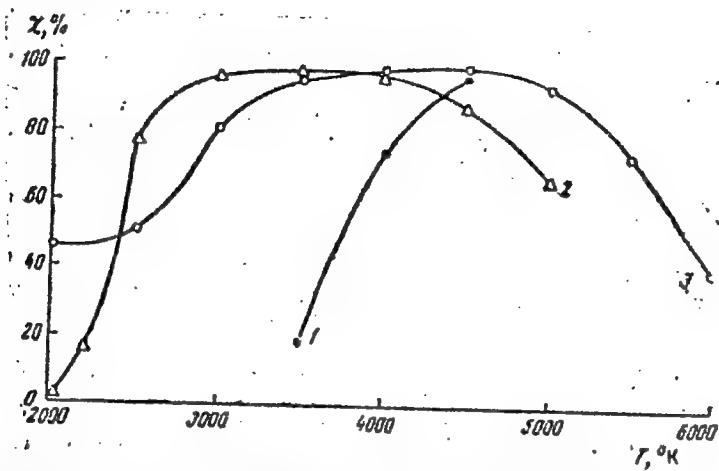


Fig. 1. 1--concentration of elemental silicon during thermal decomposition of  $\text{SiCl}_4$ ;  
2--concentration of  $\text{SiO}$  during oxidation of  $\text{SiCl}_4$  with oxygen; 3--concentration of  
 $\text{SiO}_2$ .

SUB CODE: 07,20/ 10/ SUBM DATE: 08Jul65/ ORIG REF: 004/ OTH REF: 005  
Card 3/3

ACC NR: AT7006784

(A)

SOURCE CODE: UR/3236/65/002/000/0074/0080

AUTHORS: Dolgopolov, N. N. (Candidate of technical sciences); Polak, L. S. (Doctor of physico-mathematical sciences); Fridman, V. I. (Engineer); Vurzel', F. B. (Engineer); Maksimov, A. I. (Engineer)

ORG: none

TITLE: High-frequency electrodeless discharge and the possibilities of its application in the production of polymeric materials

SOURCE: Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov. Sbornik trudov, no. 2(10), 1965. Elektrofizicheskiye metody issledovaniya stroitel'nykh materialov (Electrophysical methods of investigating building materials), 74-80

TOPIC TAGS: silicon compound, silicon dioxide, gas discharge, electric discharge

ABSTRACT: A high-frequency electrodeless discharge burner is described. The burner design is similar to that reported by A. V. Donskoy and S. V. Dresvin (Zh. Elektrotermiya, No. 5, 37, 1963). A schematic of the apparatus is presented. The temperature distribution in the flame was determined in terms of the absolute intensities of number of argon emission lines. The experimental results are shown graphically (see Fig. 1). A scheme for the continuous production of pure silicon

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ACC NR: AT7006784

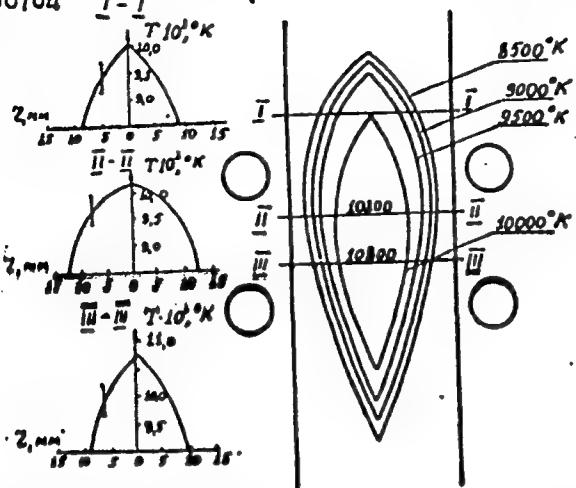


Fig. 1. Spatial distribution of temperature in an argon discharge containing additions of hydrogen

monoxide and silicon dioxide with the aid of the electrodeless burner was developed. This scheme is based on the following system of reactions:



The experimental results are tabulated. It was found that the use of the electrodeless discharge method introduces a considerable simplification in the production

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"APPROVED FOR RELEASE: 06/13/2000

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ACC NR: AT7006784

of high purity silicon dioxide. Orig. art. has: 1 table, 3 graphs and 2 equations.

SUB CODE: 11,07,09 SUBM DATE: none/ ORIG REF: 003/ OTH REF: 009

Card 3/3

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513720010-2"

L 48133-65 EWT(m)/EPF(c)/EPR/EPN(j)/EWA(c) Pg-4/Pr-4/Ps-4 RPL WW/JW/RM  
ACCESSION NR: AP5008652 S/0064/65/000/003/0178/0180

36  
3

AUTHORS: Deyzenrot, I. V.; Kogan, V. B.; Fridman, V. M.

TITLE: Method of separating pure hexamethylenediamine

SOURCE: Khimicheskaya promyshlennost', no. 3, 1965, 178-180

TOPIC TAGS: hexamethylenediamine, adiponitrile, hexamethyleneimine, rectification, polymer, nylon technology

ABSTRACT: A method of rectification purification of hexamethylenediamine (HMD), obtained by hydration of adiponitrile (ADN), to remove hexamethyleneimine (HMI) and other impurities was developed. First, the vapor-liquid equilibrium conditions of the HMI-HMD, HMD-ADN, and HMI-ADN systems were determined by ring temperature, pressure, and vapor tension with an ebullioscope (type used by U.S. Bureau of Standards) and by calculating the equilibrium conditions from a set of 7 equations. The pressure-temperature-phase separation relationships for the three systems are presented in graphical form, and other parameters (including activity coefficients) are given in table form. The pure HMD separation experiments were performed on a 1500-mm high, 30-cm diameter rectification column. The reaction mixture was introduced with  $\approx 15\%$  by weight of water.

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ACCESSION NR: AP5008652

The first fractionation at atmospheric pressure and 95.5°C removed a mixture of HMI and water (50% HMI); the second at 20-25 mm Hg contained 1,2-diaminocyclohexane and traces of H<sub>2</sub>O and HMD; the third fractionation at 20 mm Hg and 94°C yielded pure HMD as determined by crystallization temperature of 40.9°C. The ADN had to be cleaned by the permanganate method before using to obtain pure HMD. An industrial rectification method for obtaining pure HMD is recommended as shown in Fig. 1 on the Enclosure. Technical HMD with 15% H<sub>2</sub>O is introduced in Column I where HMI and H<sub>2</sub>O are removed. H<sub>2</sub>O, low boiling point impurities and 1,2-diaminocyclohexane are removed in Column II. After a secondary purification pass in Column III the pure HMD is obtained from Column IV. Orig. art. has: 4 figures and 4 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 01

SUB CODE: 00

NO REF SOV: 005

OTHER: 002

Card 12/3

FRIDMAN, V.I.  
CA

15

Composition for preventing boiler scale. V. I. Fridman and A. A. Ramlov. U.S.S.R. 64,401, Feb. 28, 1945. Brown coal is ground in an aq. soln. of 8-10% (on the wt. of coal) of alkali to form a colloidal suspension. The suspension is allowed to settle and the solids are sepi. To the filtrate is added Na phosphate and the product is used to prevent boiler scale. The grinding in an alk. medium cuts substances of the lignite type, which possess anti-scale properties and are also stabilizers for the colloidal particles of the coal. M. Hesse

ASA-15A METALLURGICAL LITERATURE CLASSIFICATION

ZAGORODNAYA, G.A.; FRIDMAN, V.M.

Elimination of magnetic vibration in turbogenerator stators.  
Elektrosila no.19:15-18 '60. (MIRA 15:2)  
(Turbogenerators--Vibration)

FRIDMAN, V.M., inzh.; ZAGORODNAYA, G.A., inzh.; KOZHEVNIKOV, I.F.,  
inzh.; KURILOVICH, L.V., inzh.

Vibration of the rotors of turbogenerators with flexible  
frames. Elektrotehnika 34 no.10:47-51 0 '63.

(MIRA 16:11)

FRIDMAN, V.M.

Modification of the Galerkin method for the solution of the  
problem of mutual vibrations of turbine disks and blades.  
Trudy LPI no.235:23-32 '64. (MIRA 17:11)

L 28908-66 EWP(k)/ENT(m)/T-2/EWP(w)/EWP(v) IJP(c) FM/WW  
ACC NR: AT6019156 SOURCE CODE: UR/2563/65/000/252/0037/0094

AUTHOR: Fridman, V. M.

48  
B+1

ORG: none

TITLE: Bending oscillations of a packet of naturally bent rods in a centrifugal force field

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy, no. 252, 1965, 87-94

TOPIC TAGS: turbine blade, bending strength, elastic oscillation

ABSTRACT: An analysis of free bending oscillations of turbine blades, considering that one end of each blade is infinitely rigidly fastened to a rigid rotating disk, the other end connected with the other blades by banding. The method used is a variation of Galerkin's method, with the difference that not only the form of the oscillations, but also the form of the bending moment is approximated. This allows an increase in the accuracy of computation of the frequencies of the free oscillations without increasing the volume of computation. Orig. art. has: 2 figures and 20 formulas. [JPRS]

SUB CODE: 13, 20 / SUBM DATE: none / ORIG REF: 007

Card 1/1 (C)

L 28083-66 EWT(m)/ETC(f)/EWG(m)/EWP(t)/ETI		IJP(c)	RDW/JD
ACC NR:	AP6015609	SOURCE CODE: UR/0020/66/168/002/0318/0319	
AUTHOR: <u>Korsunskiy, M. I. (Academician AN KazSSR)</u> ; <u>Fridman, V. M.</u>			
ORG: <u>Institute of Nuclear Physics, Academy of Sciences KazSSR (Institut yadernoy fiziki Akademii nauk KazSSR)</u>			
TITLE: Spectral distribution of the high voltage photoelectric effect in <u>CdTe</u> thin films			
SOURCE: AN SSSR. Doklady, v. 168, no. 2, 1966, 318-319			
TOPIC TAGS: photoelectric effect, photo emf, heat effect, cadmium telluride			
ABSTRACT: An investigation was made of the effect of the substrate temperature during the deposition of a CdTe thin film on the spectral distribution of the short-circuit current. It was found that with substrate temperatures higher than 310C, no sign inversion occurs when the incident light wavelength is varied in the range of 450-900 m $\mu$ . At substrate temperatures of 250-300C, the sign reverses when the wavelength is shortened; with decreasing temperatures, the inversion can be obtained at increasing wavelengths. The above results are compared with those of Adirovich (E. I. Adirovich, V. M. Rubinov, and Yu. M. Yuabov. Izv. AN UzSSR, ser. fiz-matem., no. 6, 63, 1964), who obtained sign inversion by changing the angle of the deposition of the molecular beam. In order to establish whether it is the substrate temperature or the oblique deposition that is primarily responsible for the			
Card 1/2		UDC: 539.293	

L 28083-66

ACC NR: AP6015609

sign inversion, the same experiments were repeated at a substrate temperature of 240C and a film deposition angle of only 20° (conditions which Adirovich and other researchers felt should preclude inversion). It was established that sign inversion can be observed when the substrate is kept at 240C during the film's deposition. The authors propose that the angle of film deposition may affect the temperature of the substrate; this would explain the apparent inconsistencies between the authors' and Adirovich's experimental results. Orig. art. has: 2 figures. [ZL]

SUB CODE: 20/ SUBM DATE: 29Nov65/ ORIG REF: 002/ ATD PRESS: 4261

Card 2/2 CC

"APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513720010-2

PANASYUK, A.I.; FRIDMAN, V.M.; KIVOROSTETSKIY, V.I.

Synthetic diamonds at the Kiev Automatic Machine-Tool Plant.  
Mashinostroitel' no.10:34-35 0 '64.

(MIRA 17:11)

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513720010-2"

*FRIDMAN, V.M.*

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Diazotype viscous film. V. M. Friedman. *Akademiya Nauk, Izv. Akad. Nauk SSSR, No. 2, 38-40; Akad. Nauk SSSR, Izv. 1, No. 10, 67 (1939).* The basic diazotype film is a viscous film to which light sensitivity is imparted by an introduction of diazo compds. It is a noninflammable film, and is very inexpensive (7 times cheaper than the cellulose nitrate, and 13.8 times cheaper than the cellulose acetate film). Since it is unstable in the presence of moisture, it must be covered after drying with a layer of lacquer. The diazotype light-sensitive film is obtained by treating the viscous film for 5 min. in a diazotype soln. This soln. consists of the Na 1,2-diazomaphtholsulfonate, phloroglucinol, lactic acid, glycerol and Na Ti citrate or tartrate. The film is dried in cylindrical driers on cylinders heated with hot H<sub>2</sub>O. Cellulose nitrate and cellulose acetate lacquers are used for protecting the film against moisture. W. R. Henn

FRIDMAN, V.M.  
ca

5

Preparation of three color positives with dichromated  
platin. V. M. Friedman. *Ann. of Photog.* 1930,  
No. 10, 48-52, cl. 1-1 33, 7681. - The Moscow studios  
have elaborated a dichromated gelatin process for 3-color  
motion picture prints. In 1930, approx. 500,000 m. of pos.  
color film was produced. In making the negative, 3 ex-  
posures through 3-color filters are made for each frame on  
1 Panatomic film. Three intermediate pos. matrices on  
filters are printed from this negative. Blank film contg.  
the sound record in black and white is used as a stock for  
the final color print because the shrinkage of this film is  
very slight. The blank film is first perforated and then the  
sound record is printed and developed. The film is then  
hardened in 1% Cr alum and coated with a soln. of di-  
chromated gelatin. Next, the hardened and coated film is  
printed in contact with one of the sepia, positives in a special  
printer. The light source consists of 4 lamps of 1000 w

Each and the speed of the film is 7.0 m. per hr. The  
blue record is printed 4 times and the yellow and red are  
printed 3 times. If a 114 quartz lamp is used, the film  
passes the light only once for each color at a speed of 25  
m. per hr. The latter yields a print of much better quality.  
Rapts. in treating the exposed film with org. reducers  
showed that this exposure may be reduced 4 times. The  
exposed film is then allowed to remain in the dark for the  
dark reaction at 40° for 18-20 hrs., to increase the tanning  
of the exposed portions. The resulting blank film con-  
tains an image tanned to different degrees. The film is  
then passed through a dye soln. in which the untanned and  
swollen gelatin is dyed the more heavily, as in the Pinac-  
type process. The excess dye is then washed off and the  
film is dried. The final step of the process is hardening  
in 1% Cr alum to prevent diffusion of the dye. Then the  
film is again washed and dried. The red and yellow prints  
are obtained on the blue print by applying, exposing and  
dyeing additional coatings as described. The last hardening  
after the yellow is omitted.

W. R. Eichler and M. W. Seymour

APPENDIX - BIBLIOGRAPHICAL LITERATURE CLASSIFICATION

1. SUBJECT	2. SUBJECT	3. SUBJECT	4. SUBJECT	5. SUBJECT	6. SUBJECT	7. SUBJECT	8. SUBJECT	9. SUBJECT	10. SUBJECT	11. SUBJECT	12. SUBJECT	13. SUBJECT	14. SUBJECT	15. SUBJECT	16. SUBJECT	17. SUBJECT	18. SUBJECT	19. SUBJECT	20. SUBJECT
1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200	1200-1200-1200

FRIDMAN, V.M.; RAU, N.I., redaktor; VORONTSOVA, L.M., tekhnicheskiy redaktor.

[Photography; black and white, color, and stereoscopic] Fotografiia;  
cherno-belaia, tsvetnaia, stereoskopicheskaiia. Izd. 2-ee, ispr. i  
dop. Moskva, Gos.izd-vo mestnoi promyshl. RSFSR, 1957. 283 p.

(MLRA 10:4)

(Photography)

BUDNIKOVA, T.V.; FRIDMAN, V.M.

Choice of the points of support for a telescope mirror.  
Izv. GAO 24 no.1:119-124 '64. (MIRA 18:3)

1. Kafedra dinamiki i prochnosti mashin Leningradskogo  
politekhnicheskogo instituta imeni Kalinina.

FRIEDMAN, V. M.

Determining the deflection of a telescope mirror due to strain  
on the casing. Inv. GAO 24 no.1;138-144 '64. (NCRA 18:3)

J 15644-66 EWT(1)/EWT(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) IJP(c) RDW/JD/AT  
ACC NR: AP6003808 SOURCE CODE: UR/0181/66/008/001/0263/0264

AUTHOR: Korsunskiy, M. I.; Fridman, V. M.

ORG: Institute of Nuclear Physics, AN KazSSR, Alma-Ata (Institut yadernoy fiziki  
AN KazSSR)

TITLE: On some properties of a high-voltage photoelectric effect in thin CdTe layers

SOURCE: Fizika tverdogo tela, v. 8, no. 1, 1966, 263-264

TOPIC TAGS: photoelectric effect, photoelectromotive force, photoelectric cell,  
cadmium telluride

ABSTRACT: An investigation was made of the high-voltage photoelectric effect in cadmium telluride thin layers. Two methods were used to measure the capacity  $C$  of the layers: 1) The quantity of electricity  $Q$  in a specimen was determined by charging (by illuminating) to a potential  $V_{ph}$  and discharging (after illuminating) on a ballistic galvanometer calibrated with the aid of a normal solenoid. The ratio  $Q/V_{ph}$  represented the capacity  $C$ . 2) A known capacity  $C_0$  (electrostatic voltmeter) was connected to a layer charged to a potential  $V_{ph}$ . The potential difference  $V$  was then measured.  $C$  was calculated from the relationship  $V(C + C_0) = V_{ph}C$ . The values obtained by both methods coincided. The  $C$  of the specimens appeared to be of the order of  $10 \text{ cm}^{-2}$ , thus considerably exceeding the capacity expected on the basis of geometrical conditions. The large capacity of CdTe layers indicates that these

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L 15644-66

ACC'NR: AP6003808

layers have many thin interlayers on whose surfaces charges of opposite signs can accumulate. These interlayers serve as separate photoelements. Their subsequent connection causes the formation of a high-voltage photo emf. A relaxation of  $V_{ph}$  during the switching on and switching off of the light was clearly seen in the CdTe specimens. The relaxation time of  $V_{ph}$  at illumination  $\tau_{ill}$  depends on the light intensity  $L$ ; when  $L$  increases  $\tau_{ill}$  decreases. Furthermore, at all illumination intensities  $\tau_{ill} \approx r_{ph}C$  and  $\tau_{dark} = r_{dark}C$ , where  $\tau$  is the specimen's resistance. In all cases investigated it was possible to represent the relaxation of  $V_{ph}$  as the relationship  $dV/dt = \beta L/C - V_{ph}/RC$ , where  $\beta$  is a constant differing from specimen to specimen. From this relationship it follows that: 1) The short circuit current  $i_{sh}$  must be equal to  $\beta L$ , i.e., it should be proportional to the light intensity. 2) The dependence of  $V_{ph}/L$  on  $L$  and  $r_{ph}$  on  $L$  should coincide. 3) The stationary value of  $V_{ph}$  should be equal to  $\beta L r_{ph}$ . 4) The ratio  $i_{sh}/(dV_{ph}/dt)_{t \rightarrow 0}$  should be equal to  $C$ . All these relations hold true for a light intensity range from  $10^{-4}$  to  $1.2 \times 10^{-2} \text{ w} \cdot \text{cm}^{-2}$ . Orig. art. has: 1 formula and 1 table. [JA]

SUB CODE: 20/ SUBM DATE: 30Jul65/ ORIG REF: 002/ OTH REF: 002/ ATD PRESS:

4201

Card 2/2

L 40843-66 EWT(1) IJP(c) AT

ACC NR: AP6020199

SOURCE CODE: UR/0056/66/050/006/1464/1471 6/13

AUTHOR: Polyakova, G. N.; Tatus', V. I.; Strel'chenko, S. S.; Fogel, Ya. M.; Fridman, V. M.ORG: Physicotechnical Institute, Academy of Sciences, Ukrainian SSR  
(Fiziko-tehnicheskiy institut Akademii nauk Ukrainskoy SSR)TITLE: Distribution by rotational energy level of molecules excited by ion impactSOURCE: Zh ekspер i teor fiz, v. 50, no. 6, 1966, 1464-1471

TOPIC TAGS: molecular spectrum, proton reaction, hydrogen atom reaction, spectral energy distribution, Boltzmann distribution, ion impact, rotation energy

ABSTRACT: The experimental apparatus and methodology are described for investigating the intensity distribution in the rotational structure of molecular spectrum bands. The intensity distributions of rotational lines of the  $\lambda = 3914$  and  $\lambda = 4278 \text{ \AA}$  bands have been investigated in the spectrum of the first negative system of  $N_2^+$  excited by impact of the mixed beam of 30-kev protons and hydrogen atoms. It has been observed that the distribution of the rotational line

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L 40843-66

ACC NR: AP6020199

intensity deviates from the Boltzmann distribution by an amount which exceeds the allowable measurement error. Orig. art. has: 4 figures and 1 formula. [Based on authors' abstract] [NT]

SUB CODE: 20/ SUBM DATE: 06Jan66/ ORIG REF: 003/ OTH REF: 009

Card 2/2ML-P

SUBJECT USSR/MATHEMATICS/Integral equations CARD 1/1 PG - 451  
 AUTHOR FRIDMAN V.M.  
 TITLE The method of successive approximations for the Fredholm  
 integral equation of first kind.  
 PERIODICAL Uspechi mat. Nauk 11, 1, 233-234 (1956)  
 reviewed 12/1956

The author proves the following theorem: Let  $K(x,s)$  be a symmetric positive definite kernel which is summable with square. Let the equation

$$(1) \quad \int_a^b K(x,s) \varphi(s) ds = f(x), \quad f(x) \in L_2(a,b)$$

be solvable. Let the sequence  $\{\varphi_n(x)\}$  be defined by

$$\varphi_n(x) = \varphi_{n-1}(x) + \lambda [f(x) - f_{n-1}(x)],$$

where  $\varphi_0(x) \in L_2(a,b)$ ,  $f_{n-1}(x) = \int_a^b K(x,s) \varphi_{n-1}(s) ds$ ,  $0 < \lambda < 2 \lambda_1$ ,  $\lambda_1$  - the

smallest characteristic number of the kernel  $K(x,s)$ . Then the sequence  $\{\varphi_n(x)\}$  in the mean converges to the solution of (1).

New Methods of Solving a Linear Operator Equation SOV/20-123-3-13/58

The velocity of convergence is given. §2. Direct method for separable H. Let

$$(6) \quad x_n = x_0 + \sum_{j=1}^n \mu_j A^* \varphi_j,$$

where  $\{\varphi_i\}$  is a complete system in H and  $\mu_j$  are determined from

$$(7) \quad \sum_{j=1}^n \mu_j (A^* \varphi_j A^* \varphi_k) + (Lx_0, \varphi_k) = 0.$$

Theorem 2: The sequence  $\{x_n\}$  is unique and converges monotonely and strongly to  $x^*$ . §3. Multiple-step iteration, the convergence of which is not slower than that one of (5). There are 5 Soviet references.

PRESENTED: May 25, 1959, by V.I.Smirnov, Academician

SUBMITTED: May 21, 1959

Card 2/2

FRIDMAN, V.M.

Iterative process with minimum errors for a nonlinear  
operator equation. Dokl. AN SSSR 139 no.5:1063-1066 Ag '61.  
(MIRA 14:8)

1. Predstavleno akademikom V.I. Smirnovym.  
(Differential equations)  
(Operators (Mathematics))

FRIDMAN, V.M.

Convergence of methods of steepest descent. Usp.mat.nauk 17  
no.3:201-204 My-Je '62. (MIRA 15:12)  
(Differential equations, Linear)

ACC NR: AP7002240

SOURCE CODE: UR/0280/66/000/006/0101/0109

AUTHOR: Blazhkin, K. A. (Leningrad); Fridman, V. M. (Leningrad)

ORG:: none

TITLE: An algorithm of instructing a linear perceptron

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 6, 1966, 101-109

TOPIC TAGS: pattern recognition, linear <sup>function</sup> perceptron, learning <sup>mechanism</sup> perceptron, <sup>process</sup> programmed teaching

ABSTRACT:

A method of instructing a linear perceptron whose output element is taken in the form of an adder to separate input situations into classes (to recognize the objects) is proposed. A mathematical model of the process of instruction and recognition is presented which consists in establishing in the perceptron the correspondence between the object ( $a_j$ ) to be recognized and a certain number

$$y = (\beta_j, v) - \theta \quad (1)$$

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UDC: none

BC

B-1-8

Preparation of sodium by carbonation of sodium chlorite in liquid ammonia. B. B. VASIL'YEV, J. R. SARKISYAN, and V. M. FRIEDMAN (K. Chern. Ind. Russ., 1957, 16, 618-624).—Max. yield (95%) of  $\text{NH}_4\text{CO}_3$  (I) is obtained by adding twice as much  $\text{NaCl}$  as is required for saturation of  $\text{NH}_4\text{CO}_3$  at 0°, and heating after 1 hr. At 20° the amount of  $\text{NaCl}$  should be 1 g. per 140 g. of  $\text{NH}_4\text{CO}_3$ , when the yield of (I) is 80-84%. The ppt. of (I) is washed with  $\text{NH}_3$  and steam is passed through the mass at 200-205°, when (I) is converted into  $\text{Na}_2\text{CO}_3$  (90% pure). The  $\text{NH}_4\text{Cl}$  obtained as a by-product contains 6-7% of  $\text{NaCl}$ . The solutions may be filtered in Al or cast- $\text{Be}$  apparatus. R. T.

R. T.

1960-61 METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513720010-2"

Reaction of hydrogen sulfide with salts of sulfuric acid.  
 I. Formation of sodium dithionate in the reaction of hydrogen sulfide with solutions of sodium sulfate and sodium bisulfite (in the production of sodium thiosulfate). Va. 1. Zilberman and V. Makrisman. *J. Gen. Chem. (U. S. S. R.)* 10, 847-88 (1940).—The investigation was begun with a study of the com. production of  $\text{Na}_2\text{S}_2\text{O}_6$  according to the summation reaction:  $2\text{Na}_2\text{SO}_4 + 2\text{NaHSO}_3 + 2\text{H}_2\text{S} \rightarrow 3\text{Na}_2\text{S}_2\text{O}_6 + 3\text{H}_2\text{O}$ . To this end, solns. of  $\text{Na}_2\text{SO}_4$  and  $\text{NaHSO}_3$  and their mixts. were treated with a  $\text{H}_2\text{S}$  current at 20-100° until the reaction was completed. The reaction was followed by removing samples at definite intervals and analyzing  $\text{Na}_2\text{S}_2\text{O}_6$ ,  $\text{NaHSO}_3$ ,  $\text{Na}_2\text{SO}_4$  and polythionates in the mixt. by the method of Kurtenackr and Goldbach (C. A. 22, 362). The unreacted  $\text{H}_2\text{S}$  was absorbed in 2 flasks contg.  $\text{KOH}$  and analyzed. Contrary to the literature data, the reaction forms also  $\text{Na}_2\text{S}_2\text{O}_5$ . Since it is not oxidized by  $\text{Br}$  in a neutral soln., it was deid. in the filtrate from the  $\text{BaSO}_4$  by the method of Bassett and Henry (C. A. 29, 7280). At the optimum ratio of  $\text{Na}_2\text{SO}_4$  and  $\text{NaHSO}_3 = 1:1$ , no polythionates ( $\text{Na}_2\text{S}_n\text{O}_6$ ) are formed and max. yields of 79.6%  $\text{Na}_2\text{S}_2\text{O}_6$  and 7.2%  $\text{Na}_2\text{S}_2\text{O}_5$  are obtained. With increasing and decreasing ratio of the reactants the yields of  $\text{Na}_2\text{S}_2\text{O}_6$  decrease and become zero with  $\text{Na}_2\text{SO}_4$  and  $\text{NaHSO}_3$  alone. The yields of  $\text{Na}_2\text{S}_2\text{O}_5$  increase with greater acidity ( $\text{NaHSO}_3$ ) of the mixts. With an increase of temp. above 20° the yield of  $\text{Na}_2\text{S}_2\text{O}_6$  decreases and that of  $\text{Na}_2\text{S}_2\text{O}_5$  increases.

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CIA-RDP86-00513R000513720010-2"

## PROCESSES AND PROPERTIES INDEX

The reaction of hydrogen sulfide with the salts of sulfuric acid. III. The effect of the concentration of hydrogen ions on the direction of the process. Ya. I. Zilberman and V. M. Fridman. *J. Gen. Chem. (U. S. S. R.)* 11, 363-70 (1941); *cf. C. A.* 35, 20334. The methods and analytical control were the same as in the previous papers, except the pH was determined potentiometrically. The effects of pH of the initial soln. on the course of the reaction between H<sub>2</sub>S and Na<sub>2</sub>SO<sub>3</sub> and NaHSO<sub>3</sub> solns. were investigated at 30° and 20°. At 30° the side reactions are more pronounced. An optimum yield of S<sub>2</sub>O<sub>4</sub><sup>2-</sup> is obtained at 20°. A max. yield of thiosulfate is obtained at pH 6.2, i. e., at an equimolar ratio of Na<sub>2</sub>SO<sub>3</sub> and NaHSO<sub>3</sub> in the initial soln. Excess SO<sub>3</sub><sup>2-</sup> in the initial soln. decreases the yield more than does an excess of HSO<sub>3</sub><sup>-</sup>. The pH value increases uniformly until HSO<sub>3</sub><sup>-</sup> disappears from the soln., after which the acidity increases, first slowly and later very rapidly, until the content of SO<sub>4</sub><sup>2-</sup> in the soln. becomes very small. The acidity then remains unchanged. The points at which the pH is at the min. correspond to the max. amt. of S<sub>2</sub>O<sub>4</sub><sup>2-</sup>. In the last stage of the process the pH value increases at a rate that is directly proportional to the acidity of the initial soln. Thirteen references. W. R. Hein

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## ALB-SEA METALLURGICAL LITERATURE CLASSIFICATION

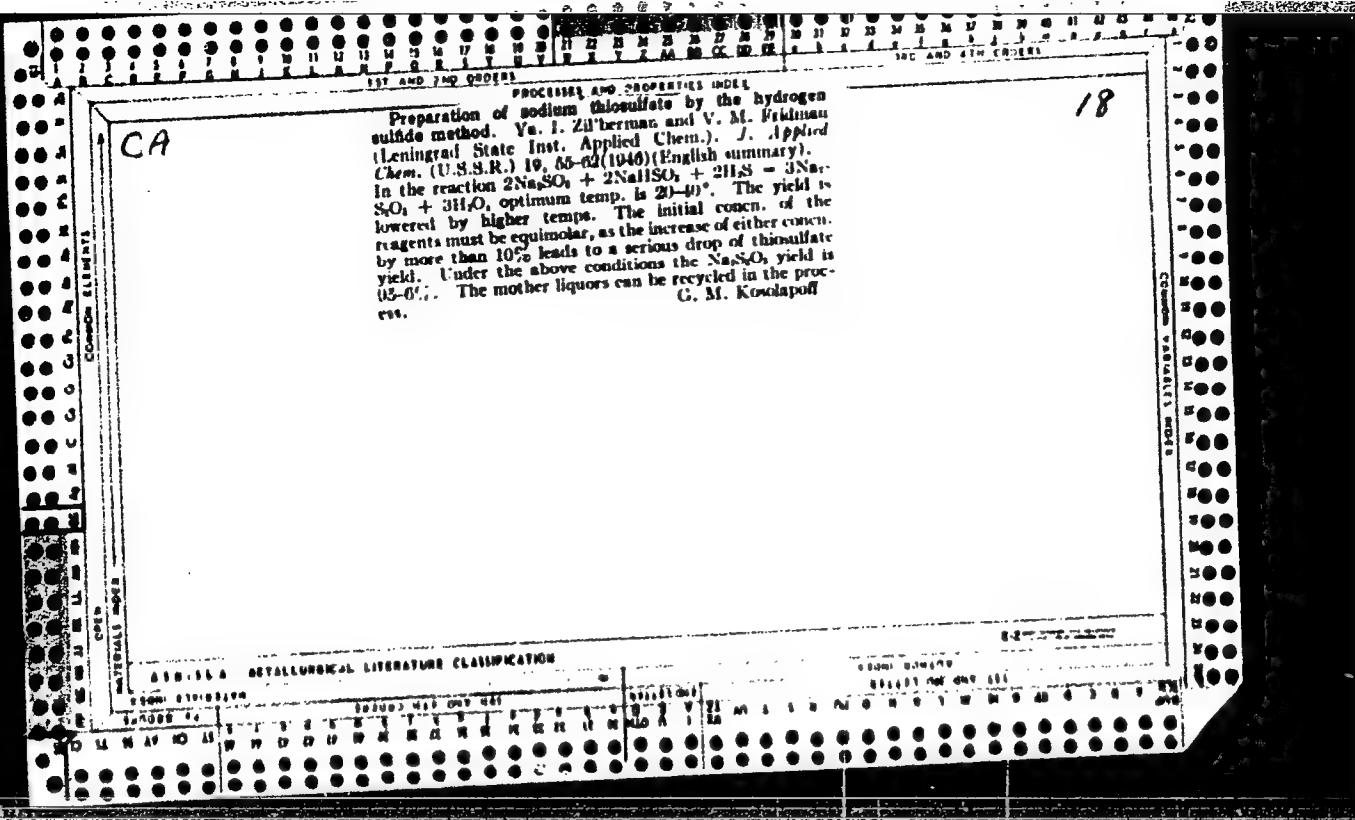
1400000-91	1500000-1599999	1600000-1699999	1700000-1799999	1800000-1899999	1900000-1999999	2000000-2099999	2100000-2199999	2200000-2299999	2300000-2399999	2400000-2499999	2500000-2599999	2600000-2699999	2700000-2799999	2800000-2899999	2900000-2999999	3000000-3099999	3100000-3199999	3200000-3299999	3300000-3399999	3400000-3499999	3500000-3599999	3600000-3699999	3700000-3799999	3800000-3899999	3900000-3999999	4000000-4099999	4100000-4199999	4200000-4299999	4300000-4399999	4400000-4499999	4500000-4599999	4600000-4699999	4700000-4799999	4800000-4899999	4900000-4999999	5000000-5099999	5100000-5199999	5200000-5299999	5300000-5399999	5400000-5499999	5500000-5599999	5600000-5699999	5700000-5799999	5800000-5899999	5900000-5999999	6000000-6099999	6100000-6199999	6200000-6299999	6300000-6399999	6400000-6499999	6500000-6599999	6600000-6699999	6700000-6799999	6800000-6899999	6900000-6999999	7000000-7099999	7100000-7199999	7200000-7299999	7300000-7399999	7400000-7499999	7500000-7599999	7600000-7699999	7700000-7799999	7800000-7899999	7900000-7999999	8000000-8099999	8100000-8199999	8200000-8299999	8300000-8399999	8400000-8499999	8500000-8599999	8600000-8699999	8700000-8799999	8800000-8899999	8900000-8999999	9000000-9099999	9100000-9199999	9200000-9299999	9300000-9399999	9400000-9499999	9500000-9599999	9600000-9699999	9700000-9799999	9800000-9899999	9900000-9999999	0000000-0099999	0100000-0199999	0200000-0299999	0300000-0399999	0400000-0499999	0500000-0599999	0600000-0699999	0700000-0799999	0800000-0899999	0900000-0999999	1000000-1099999	1100000-1199999	1200000-1299999	1300000-1399999	1400000-1499999	1500000-1599999	1600000-1699999	1700000-1799999	1800000-1899999	1900000-1999999	2000000-2099999	2100000-2199999	2200000-2299999	2300000-2399999	2400000-2499999	2500000-2599999	2600000-2699999	2700000-2799999	2800000-2899999	2900000-2999999	3000000-3099999	3100000-3199999	3200000-3299999	3300000-3399999	3400000-3499999	3500000-3599999	3600000-3699999	3700000-3799999	3800000-3899999	3900000-3999999	4000000-4099999	4100000-4199999	4200000-4299999	4300000-4399999	4400000-4499999	4500000-4599999	4600000-4699999	4700000-4799999	4800000-4899999	4900000-4999999	5000000-5099999	5100000-5199999	5200000-5299999	5300000-5399999	5400000-5499999	5500000-5599999	5600000-5699999	5700000-5799999	5800000-5899999	5900000-5999999	6000000-6099999	6100000-6199999	6200000-6299999	6300000-6399999	6400000-6499999	6500000-6599999	6600000-6699999	6700000-6799999	6800000-6899999	6900000-6999999	7000000-7099999	7100000-7199999	7200000-7299999	7300000-7399999	7400000-7499999	7500000-7599999	7600000-7699999	7700000-7799999	7800000-7899999	7900000-7999999	8000000-8099999	8100000-8199999	8200000-8299999	8300000-8399999	8400000-8499999	8500000-8599999	8600000-8699999	8700000-8799999	8800000-8899999	8900000-8999999	9000000-9099999	9100000-9199999	9200000-9299999	9300000-9399999	9400000-9499999	9500000-9599999	9600000-9699999	9700000-9799999	9800000-9899999	9900000-9999999	0000000-0099999	0100000-0199999	0200000-0299999	0300000-0399999	0400000-0499999	0500000-0599999	0600000-0699999	0700000-0799999	0800000-0899999	0900000-0999999	1000000-1099999	1100000-1199999	1200000-1299999	1300000-1399999	1400000-1499999	1500000-1599999	1600000-1699999	1700000-1799999	1800000-1899999	1900000-1999999	2000000-2099999	2100000-2199999	2200000-2299999	2300000-2399999	2400000-2499999	2500000-2599999	2600000-2699999	2700000-2799999	2800000-2899999	2900000-2999999	3000000-3099999	3100000-3199999	3200000-3299999	3300000-3399999	3400000-3499999	3500000-3599999	3600000-3699999	3700000-3799999	3800000-3899999	3900000-3999999	4000000-4099999	4100000-4199999	4200000-4299999	4300000-4399999	4400000-4499999	4500000-4599999	4600000-4699999	4700000-4799999	4800000-4899999	4900000-4999999	5000000-5099999	5100000-5199999	5200000-5299999	5300000-5399999	5400000-5499999	5500000-5599999	5600000-5699999	5700000-5799999	5800000-5899999	5900000-5999999	6000000-6099999	6100000-6199999	6200000-6299999	6300000-6399999	6400000-6499999	6500000-6599999	6600000-6699999	6700000-6799999	6800000-6899999	6900000-6999999	7000000-7099999	7100000-7199999	7200000-7299999	7300000-7399999	7400000-7499999	7500000-7599999	7600000-7699999	7700000-7799999	7800000-7899999	7900000-7999999	8000000-8099999	8100000-8199999	8200000-8299999	8300000-8399999	8400000-8499999	8500000-8599999	8600000-8699999	8700000-8799999	8800000-8899999	8900000-8999999	9000000-9099999	9100000-9199999	9200000-9299999	9300000-9399999	9400000-9499999	9500000-9599999	9600000-9699999	9700000-9799999	9800000-9899999	9900000-9999999	0000000-0099999	0100000-0199999	0200000-0299999	0300000-0399999	0400000-0499999	0500000-0599999	0600000-0699999	0700000-0799999	0800000-0899999	0900000-0999999	1000000-1099999	1100000-1199999	1200000-1299999	1300000-1399999	1400000-1499999	1500000-1599999	1600000-1699999	1700000-1799999	1800000-1899999	1900000-1999999	2000000-2099999	2100000-2199999	2200000-2299999	2300000-2399999	2400000-2499999	2500000-2599999	2600000-26999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**Reaction between hydrogen sulfide and sulfites** IV  
**Mechanism of the reactions taking place in the preparation of sodium thiosulfate.** Ya. I. Zilberman and V. M. Finkelman, *J. Gen. Chem. (U.S.S.R.)* 10, 1897-21 (1940); *cf. C.A.* 35, 8307. — The reaction of  $\text{H}_2\text{S}$  with sulfite-bisulfite solns. was studied in a small stated reaction vessel so that sampling and consequent errors were eliminated, with each charge constituting a *step* expt. The overall reaction of  $\text{H}_2\text{S}$  with  $\text{Na}_2\text{SO}_3$  is represented by  $1\text{Na}_2\text{SO}_3 + 4\text{H}_2\text{S} \rightarrow 3\text{NaHSO}_3 + 2\text{NaHS} + 3\text{H}_2\text{O}$ .  $\text{NaHSO}_3$  reacts with  $\text{NaHS}$  in 2 ways:  $\text{NaHSO}_3 + 2\text{NaHS} \rightarrow 2\text{NaHSO}_3 + \text{H}_2\text{S}$  and  $4\text{NaHSO}_3 + 6\text{NaHS} \rightarrow 7\text{NaHSO}_3 + 4\text{S} + 3\text{H}_2\text{O}$ , which condition the formation of  $\text{H}_2\text{S}$  and  $\text{S}$  at the end of interaction of  $\text{H}_2\text{S}$  with sulfite-bisulfite solns. The formation of thiosulfate is a two-step process:  $2\text{NaHSO}_3 + 2\text{H}_2\text{S} \rightarrow 2\text{NaHSO}_3 + 2\text{NaHS}$  and  $2\text{NaHS} + 3\text{NaHSO}_3 + 3\text{H}_2\text{O}$ ; the 1st step proceeds up to the point of disappearance of bisulfite and is characterized by simultaneous formation of trithionate; the 2nd proceeds after disappearance of bisulfite and is characterized by slow disappearance of trithionate. G. M. Kosolapoff

#### 1.1.3.4 METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/13/2000

CIA-RDP86-00513R000513720010-2"



ZIL'BERMAN, Ya.I.; FRIDMAN, V.M.

Production of anhydrous sodium thiosulfate. Stor.rab.Inst.prikl.  
khim. no.39:47-51'47.  
(MLRA 7:3)  
(Sodium thiosulfate)

ZIL'BERMAN, Ya.I.; FRIDMAN, V.M.

Production of sodium pyrosulfite. Sbor.rab.Inst. prikl.khim.  
no.39:52-68 '47. (MLRA 7:3)  
(Sodium pyrosulfite)

FRIDMAN V.M.

USSR/ Chemistry - Physical chemistry

Card 1/1 : Pub. 147 - 1/22

Authors : Kogan, V. B., and Fridman, V. M.

Title : Method of calculating phase equilibria of binary liquid-vapor systems

Periodical : Zhur. fiz. khim. 28/11, 1899-1995, November 1954

Abstract : A new method for the calculation of phase equilibria of binary liquid-vapor systems was introduced. The new method requires experimental determination of vapor pressures of pure components of only two mixtures containing 1/3 and 2/3 of molar fractions from one of the components. The calculation and formulation of a nomographic chart, which warrant proper accuracy and simplicity of calculation, was announced. Seven references: 3-German; 1-English and 3-USSR (1895-1953). Tables; Graph.

Institution : State Institute of Applied Chemistry, Leningrad

Submitted : December 29, 1953

FRIEDMAN, V.M.

USSR/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical B-8  
Analysis. Phase Transitions.

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26178

Author : V.B. Kogan, I.V. Deyzenrot, T.A. Kul'dyayeva, V.M. Friedman  
Title : Solubility in Systems Consisting of Methanol, Water and Nor-  
mal Paraffin Hydrocarbons.

Orig Pub : Zh. prikl. khimii, 1956, 29, No 9, 1387-1392

Abstract : The mutual solubility (MS) in binary systems consisting of methanol I and n-hexane II, n-heptane III n-octane and n-nonane, as well as in ternary systems containing water besides the above mentioned components was studied at 2 to 45°. The MS of methanol, water and normal hydrocarbons at temperatures between 20 and 10° decreases with the increase of the molecular weight of the hydrocarbon and changes very little with the temperature drop within the range of from 20 to 10°.

Card : 1/1

*V. V.*  
FRIDMAN, VOGAN, Vladimir Borisovich; ~~FRIDMAN~~, Viktor Mikhaylovich; KAFAROV, V.V.,  
doktor tekhn.nauk, prof., redaktor; TOMARCHENKO, S.L., redaktor;  
LEVIN, S.S., tekhnicheskiy redaktor; ERLIKH, Ye.Ya., tekhnicheskiy  
redaktor.

[Manual on equilibria between fluids and vapors in binary and  
multicomponent systems] Spravochnik po ravnovesiiu mezhdu  
zhidkost'iu i parom v binarnykh i mnogokomponentnykh sistemakh.  
Pod red. V.V.Kafarova. Leningrad, Gos.nauchno-tekhn.izd-vo khim.  
(MIRA 10:11)  
lit-ry, 1957. 497 p.  
(Systems (Chemistry)) (Chemical equilibrium)

FRIDMAN, V.M.

Separation of mixtures obtained in the production of alcohols containing 7-9 carbon atoms. V. B. Kogan, V. M. Friedman, and L. V. Delenov. U.S.S.R. 106,651, July 26, 1957. The sepn. is accomplished by azeotropic distn. To the mixt. is added water sufficient to form a tri-component azeotropic mixt. of BuOH-H<sub>2</sub>O-hydrocarbon. This is distd. off as an azeotropic mixt., and to the distillate is added anhyd. MeOH in a quantity sufficient to form binary azeotropic mixts. of MeOH and all the hydrocarbons. The binary mixts. are distd. off, and to the distillate is added 15% by wt. of water. Then the hydrocarbons are distd. off. M. Hoch

RM fm  
08/6

*1957*  
KOGAN, V.B.; FRIDMAN, V.M.

Determining the composition of tricomponent systems by measuring one property. Zhur.prikl.khim. 30 no.8:1141-1147 Ag '57. (MIRA 11:1)

1.Gosudarstvennyy institut prikladnoy khimii.  
(Systems (Chemistry))

FRIDMAN, V. M.

Distr: 4E4j/4E2c(j)/4E3d

Azeotropic mixtures of fatty alcohols, normal paraffin hydrocarbons, and water. V. E. Korne, V. M. Fridman, and I. V. Deseenok. Zhur. Priklad. Khim. 30, 1355-74 (1957); cf. U.S. 30, 76316. — The properties of azeotropic mixts. were studied by rectification and by the method that requires exptl. dtmns. of vapor pressures of 2 mixts. (loc. cit.). BuOH forms azeotropic mixts. with C<sub>4</sub>H<sub>10</sub>, C<sub>6</sub>H<sub>6</sub>, and C<sub>8</sub>H<sub>18</sub>, the b.p. and the BuOH contents of which are (in the order given): 68.2, 3.2; 63.85, 18; 109.45, 42.2; and 116.9, 71.5%. The d. of the azeotropic mixts. of 1BuOH-C<sub>6</sub>H<sub>6</sub> and BuOH-C<sub>8</sub>H<sub>18</sub> exhibits a neg. deviation from additivity and a pos. deviation from ideality. The b.p. and % MeOH of MeOH azeotropic mixts. with the same hydrocarbons are: 49.5, 26.4; 58.8, 40.1; 62.75, 67.5; and 64.1°, 83.4%. The b.p. and the wt. % of BuOH and H<sub>2</sub>O of the ternary azeotropic mixts. of the same hydrocarbons are: 61.5, 2.0, 10.2; 78.1, 7.6, 41.4; 80.1, 14.0, 60.0; and 80.0°, 18.3, 69.9%. Comparison of the compns. of the azeotropic mixts. BuOH-C<sub>6</sub>H<sub>6</sub>, and those of BuOH-H<sub>2</sub>O with the compns. of the ternary mixts. shows that the latter contain a higher relative proportion of C<sub>6</sub>H<sub>6</sub>, and H<sub>2</sub>O. This agrees with the regularity previously suggested (C. A. 50, 9137d). The b.p.s. of the ternary azeotropic mixts. are lower than those of the pure components and of the corresponding binary mixts.; this suggests the presence of ternary azeotropes in the ternary mixts. J. Benewitz

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State Inst  
Applied Chem.

SOV/80-32-4-25/47

5(3)

AUTHORS: Kegan, V.B., Fridman, V.M. and Romanova, T.G.

TITLE: The Separation of Mixtures of Alcohols and Hydrocarbons by the Method of Extraction (Razdeleniye smesey spirtov i uglevodorodov metodom ekstraktsii)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 847-852 (USSR)

ABSTRACT: Mixtures of alcohols and hydrocarbons are obtained in some technological processes, and this necessitates finding an effective method of their separation. In the present investigation the authors studied a possibility of such a separation by means of extraction. Ethylene glycol was chosen as a solvent. To estimate quantitatively the effectiveness of separation by this method, data on equilibria between the liquid phases in the system alcohol - hydrocarbon - ethylene glycol were necessary. The system consisting of butyl alcohol, heptane and ethylene glycol was taken as an example. Data on the composition and specific weight of saturated solutions in this system were compiled in Table 1, these data were used for plotting the curves of relationship in Figure 1, and a triangular diagram of equilibria, pictured in Figure 2, was drawn. The

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SOV/80-32-4-25/47

The Separation of Mixtures of Alcohols and Hydrocarbons by the Method of Extraction

composition of equilibrium phases and of a mixture at a critical point, found by Alekseyev's method, are shown in Table 2. The analysis of the results has shown that the application of pure ethylene glycol, as well as its aqueous solution ensures a complete separation of initial mixtures after a single or double rinsing. Pure hydrocarbon is obtained directly in the process of extraction; alcohol can be separated from the lower layer by means of mere rectification.

There are 3 graphs, 3 tables and 3 Soviet references.

SUBMITTED: December 21, 1957

Card 2/2

5 (4)

AUTHORS:

Kogan, V. B., Fridman, V. M.  
Romanova, T. G.

SOV/76-33-7-12/40

TITLE:

Phase Equilibria in Systems Formed by Paraffin Hydrocarbons  
and Alcohols of the Aliphatic Series

PERIODICAL:

Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 7, pp 1521 - 1525  
(USSR)

ABSTRACT:

Among other methods, hydrogenation of aliphatic esters yields aliphatic alcohols, thus forming mixtures of the alcohols with hydrocarbons. For this reason, the physico-chemical properties of these mixtures are important. The authors investigated the liquid-vapor phase of the systems butanol (I) - heptane (II), (I) - octane (III), and (I) - nonane (IV). Data on the initial substances are given (Table 1). The above equilibrium was investigated by means of a circulation apparatus (Fig 1), and the composition of the samples (liquid and condensate of the vapor phase) was simultaneously determined by the method (Ref 11). The results (Tables 2-4) showed that there was a linear dependence between the logarithm of the ratio of activity coefficients of the components, on the one hand, and the composition, on the other; i.e. the solutions were almost regular.

Card 1/2

Phase Equilibria in Systems Formed by Paraffin  
Hydrocarbons and Alcohols of the Aliphatic Series

SOV/76-33-7-12/40

Explanation of data available in publications on the equilibrium between methanol (V) and ethanol (VI), on the one hand, and paraffin hydrocarbons (liquid-vapor), on the other, leads to the conclusion that these solutions are almost regular as well. The degree of deviation from Raoult's law is reduced by an increase in the molecular weight of the alcohol (for the system with (V), the constant  $A = 0.970$ ; with (VI),  $A = 0.905$ ; and with (I),  $A = 0.710$ ). Calculation of the composition of the azeotropic mixture of the system isopropanol - heptane (the experimental part was carried out by T. S. Tolstova) indicates that the resultant dependence of the above data on the equilibrium in the systems "aliphatic alcohol - paraffin hydrocarbon" permit predictions of the phase equilibrium. There are 4 figures, 4 tables, and 13 references, 3 of which are Soviet.

ASSOCIATION: Gosudarstvennyy institut prikladnoy khimii, Leningrad (Leningrad State Institute of Applied Chemistry)

SUBMITTED: December 18, 1957  
Card 2/2

KOGAN, Vladimir Borisovich; FRIDMAN, Viktor Mikhaylovich; KAFAROV,  
Viktor Vyacheslavovich; SUSHKOVA, T.I., red. izd-va; BLEYKH,  
E.Yu., tekhn. red.

[Manual on solubility] Spravochnik po rastvorimosti. Moskva,  
Izd-vo Akad. nauk SSSR. Vol.1. [Binary systems] Binarnye siste-  
my. Book. 1. 1961. 595 p. (MIRA 15:1)

1. Akademiya nauk SSSR. Institut nauchno-tehnicheskoy informa-  
tsii.  
(Solubility) (Systems (Chemistry))

KOGAN, Vladimir Borisovich; FRIDMAN, Viktor Mikhaylovich; KAFAROV,  
Viktor Vyacheslavovich; SUSHKOVA, T.I., red. izd-va;  
BLEYKH, E.Yu., tekhn. red.

[Manual on solubility] Spravochnik po rastvorimosti. Moskva,  
Izd-vo Akad. nauk SSSR. Vol.1. [Binary systems] Binnarne  
sistemy. Book 2. 1962. 1959 p. (MIRA 15:4)

1. Akademiya nauk SSSR. Institut nauchnoy informatsii.  
(Solubility) (Systems (Chemistry))

KOGAN, Vladimir Borisovich; FRIDMAN, Viktor Mikhaylovich; KAFAROV,  
Viktor Vyacheslavovich; SUTKOVA, T.I., red.izd-va; GALIGANOVA,  
L.M., tekhn. red.

[Handbook on solubility] Spravochnik po rastvorimosti. Moskva,  
Izd-vo Akad. nauk SSSR. Vol.2. [Ternary multicomponent systems]  
Troinyye, mnogokomponentnye sistemy. Book 1. 1963. 943 p.  
(MIRA 16:1)

1. Moscow. Vsesoyuznyy institut nauchnoy i tekhnicheskoy informa-  
tsii.

(Systems (Chemistry)) (Solubility)

KOGAN, Vladimir Borisovich; FRIDMAN, Viktor Mikhaylovich; KAFAROV,  
Viktor Vyacheslavovich; SUSHKOVA, T.I., red.izd-va;  
SOROKINA, V.A., tekhn. red.

[Manual on solubility]Spravochnik po rastvorimosti. Moskva,  
Izd-vo Akad.nauk SSSR. Vol.2.[Ternary multicomponent systems]  
Troinye, mnogokomponentnye sistemy. Book 2. 1963. 2066 p.  
(MIRA 16:4)

l. Moscow. Vsesoyuznyy institut nauchnoy i tekhnicheskoy in-  
formatsii.  
(Systems (Chemistry)) (Solubility)

KOTLYARSKIV, L.B.; NOVITSKIY, B.G., FRIDMAN, V.M.

Cavitation phenomena due to the action of an acoustic hydrodynamic emitter. Akust. zhur. 9 no.4:424-440 '63. (MIRA 17:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorsk'y institut khimicheskogo mahnostroyeniya, Moskva.

DAYZENROT, I.V.; KOGAN, V.H.; FRIDMAN, V.M.

Method of separation of pure hexamethylenediamine. Khim. prom. 41 no. 3;  
178-180 Mr 165.  
(MIRA 18:7)

FRIDMAN, V. M.

USSR/Chemistry - Leather

11 Sep 53

"Investigation of the Effects of Ultrasound Vibrations on Processes of Leather Production," V. M. Fridman, A. L. Zaydes, A. N. Mikhaylov, N. N. Dolgopolov, N. M. Karavayev, Corr Mem Acad Sci USSR; Cent Sci-Res Inst of the Leather Ind; Cent-Sci-Res Lab of Phys Methods for Investigation of Materials

DAN SSSR, Vol 92, No 2, pp 399-400

The investigation described shows that ultrasound expedites dehairing and tanning processes. Authors express the opinion that it can also be used in other processes of the leather industry.

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532.72  
533. Action of ultrasound on diffusion-controlled heterogeneous processes. N. N. Dolgorukov, V. M. Friedman and N. M. Karavaev. Dokl. Akad. Nauk SSSR, VI, No. 1, 93-3 (1953) In Russian.

Ultrasound considerably increases the rate of dissolution of a crystal of  $K_3Fe(CN)_6$  in water, and of Cu in  $HNO_3$ , even above the rate attained at high rates of rotation (1200 r.p.m.) of the dissolving bath.

R. C. MURRAY

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The effects of ultrasonic vibrations on diffusional processes

N. N. Dolgonov, V. M. Fridman, and N. M. Karavaev, Doklady Akad. Nauk SSSR, 93, 306-0

(1953).—The effect of ultrasound on the diffusion rate was studied for the diffusion of  $\text{CuSO}_4$  in 6% gelatin, and the results were compared with results obtained with varying hydrodynamic conditions (using mixers at various r.p.m.); also the diffusion of  $\text{Na}_2\text{S}_2\text{O}_3$  through a swollen gelatin film 0.015 cm. thick was studied. A higher stirring rate increased the diffusion rate, but less than did ultrasonic vibrations. The diffusion rate consts. rose from  $0.51 \times 10^{-4}$  with no stirring in the first test to  $0.80 \times 10^{-4}$  with ultrasound, and in the 2nd test from  $2.6 \times 10^{-4}$  to  $11.7 \times 10^{-4}$ ; this shows that ultrasonic vibrations change the value and the nature of diffusional resistance at the solid-liquid interface.

W. M. Sternberg

FRIDMAN, V. M.

Utilization of ultrasonic vibrations for accelerating processes of leather tanning. V. M. Fridman, A. I. Zales, N.

N. Dzhaparov, and A. N. Vaynshteyn. Byull. Izobr. Prom. 16, No. 2, 48-4 (1984).—Depilation was easily accomplished during subjection of specimen in soin. (Kind not stated) to supersonic vibrations for 5 hrs. With supersonic vibrations, tanning with oak ext. was complete in 19 hrs.; without, in 114 hrs. Leather was full.

B. Z. Kamich

17-13-55

FRIDMAN, Viktor Mironovich; VARSHAVSKAYA, L.S., redaktor; MEDVEDIEVA, L.A.,  
tekhnicheskij redaktor

[Sonic and ultrasonic waves and their use in light industry]  
Zvukovye i ul'trazvukovye kolebaniia i ikh primenenie v legkoi  
promyshlennosti. Moskva. Gos. nauchno-tekhn. izd-vo Ministerstva  
legkoi promyshlennosti SSSR, 1956. 283 p. (MLRA 10:3)  
(Ultrasonic waves--Industrial applications)  
(Sound waves)

FRIDMAN, V.M., kandidat khimicheskikh nauk; MESHKOV, K.V., kandidat  
tekhnicheskikh nauk; KARAVAYEV, N.M.,

The effect of sonic and ultrasonic waves on fur processing.  
Leg.prom. 15 no.4:42-43 Ap '55. (MIRA 8:7)

1. Chlen-korrespondent Akademii nauk SSSR.  
(Fur) (Sound waves) (Ultra sonic waves--Industrial application)

SOV/124-57-5-5930

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 131 (USSR)

AUTHOR: Fridman, V. M.TITLE: On One Approximate Method for Determining Vibration Frequencies  
(Ob odnom priblizhennom metode opredeleniya chastot kolebaniy)PERIODICAL: V sb.: Kolebaniya v turbomashinakh. Moscow, AN SSSR, 1956.  
pp 69-76

ABSTRACT: The author proposes an approximate method for determining the frequencies of the free bending vibrations of a variable-section rod, allowing for various differing modes of end constraint (clamped, simply supported, free end). For solving the problem's differential equations

$$M''(x) = [\lambda^2 \rho(x) + k(x)] Y(x) \quad (0 < x < l) \quad \text{and} \quad Y''(x) = M(x)/EI(x)$$

the author recommends specifying not only the geometric shape of the vibration  $Y(x)$ , as is customary under the Bubnov method, but also that of the bending moment  $M(x)$ ; this latter, as the author affirms, increases the accuracy of the calculation results. Thus, approximate

Card 1/2

SOV/124-57-5-5930

On One Approximate Method for Determining Vibration Frequencies

determination of the first  $n$  frequencies of the rod's free bending vibrations reduces to determining those values of the parameter  $\lambda$  which will cause the determinant of the system of  $n$  linear homogeneous equations (obtained by the method in question) to go to zero. The author adduces two examples to illustrate the use of the proposed method: 1) determination of the first vibration frequency of a turbine blade, and 2) determination of the critical speed of the rotor of an electric motor.

I. M. Volk

Card 2/2

FRIDMAN, V.M.; KUT'IN, V.A., kandidat tekhnicheskikh nauk.

Effect of sonic and ultrasonic waves on the mechanical properties  
of pelts. Leg.prom. [16] no.11:19-20 N '56. (MLRA 10:1)  
(Ultrasonic waves--Industrial applications) (Hides and skins)

YRIDMAN, V.M., kandidat khimicheskikh nauk.

The use of sonic and ultrasonic vibrations in fabric dyeing processes.  
Tekst.prom. 16 no.12:34-36 D'56. (MLRA 10:1)  
(Ultrasonic waves—Industrial applications) (Dyes and dyeing)

Novitskiy, V.M.

AUTHOR: Novitskiy, B.G. and Fridman, V.M. 46-1-19/20

TITLE: An ultra-sonic instrument for measuring certain physico-mechanical properties of leather, rubber, plastic and high-molecular weight materials. (Ultrazvukovoy pribor dla izmereniya nekotorykh fiziko-mekhanicheskikh svoystv kozhi, plasticheskikh i vysokomolekularnykh materialov.)

PERIODICAL: "Akusticheskiy Zhurnal" (Journal of Acoustics), 1957, Vol. III, No. 1, pp. 92 - 94, (U.S.S.R.)

ABSTRACT: A schematic diagram, photographs of the clamp and of the instrument itself, cross-sectional drawing of the L-cut Seignette salt disc grip are given. Constructional details are described and discussed. So are the principles and methods of measurements for various materials.  
2 photographs, 2 figures.

ASSOCIATION: Supersonic Laboratory of the Ministry of Light Industry. (Ultrazvukovaya Laboratoriya Ministerstva Legkoy Promyshlennosti, Moskva).

SUBMITTED: April, 5, 1956.

AVAILABLE: Card 1/1

FRIDMAN, V.M., kandidat khimicheskikh nauk; NOVITSKIY, B.G., inzhener.

Ultrasonic method for measuring the degree of leather  
tanning. Leg. prom. 17 no.1:23-24 Ja '57. (MIRA 10:2)

(Tanning)  
(Ultrasonic waves--Industrial applications)